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 24 May 1963
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MEMORANDUM TO: Chief, Military-Economic Division, ORR

ATTENTION : [REDACTED]

FROM : Chief, CIA/FID (NPIC)

SUBJECT : Shen-Yang Aircraft Engine Plant #410

REFERENCE : Requirement No. RR/91/63
Project No. C 535/63

1. This memorandum is in answer to referenced requirement concerning Shen-Yang Aircraft Engine Plant.

2. This study primarily concerns two areas: one the main plant of Shen-Yang Arsenal 90th and Shen-Yang Aircraft Engine Plant #410. The following paragraphs contain a description of each plant area and a list of annotations for each area. These annotations are keyed to photo enlargements Enclosures #1 and #2.

3. Shen-Yang Arsenal 90th

Shen-Yang Arsenal is located in the Ta Tung ward of Shen-Yang at coordinates 41°47'27"N/123°29'30"E. The arsenal is served by a rail line and seven rail spurs. The entire arsenal area is enclosed by a masonry wall approximately eight feet high and all entrances appear to be well secured. The total estimated floorspace is 3,110,045 square feet which is contained within assembly buildings, machine shops, workshops, administration buildings, boiler houses, test facilities, warehouses and storage buildings. All buildings in the arsenal were included in the total estimated floorspace but only major buildings have been annotated.

[REDACTED] photography was reviewed and comparison made with [REDACTED] photography. This comparison shows a complete rehabilitation of the entire arsenal. A further comparison was conducted between 1956 photography and [REDACTED]. This comparison revealed the construction of new buildings and the modification of some older buildings. These changes are indicated by the red stars (Enclosure #1). Additional changes occurred between [REDACTED]. These changes were the construction of a new building (Annotation #56, Enclosure #1 and Annotation #1 Enclosure #2) and

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and the partial completion of two wings on the engine test building at Annotation A. The unusual features at this plant are located at Annotation A, Annotation B, Annotation #89 (Enclosure #1) and Annotation #1 (Enclosure #2). The following is a description of each of the aforementioned annotations. Annotation A; this building has been identified as a test facility for an unidentified engine. Construction started possibly in early 1961 and the building was approximately 90 percent complete on [REDACTED]

25X1 [REDACTED] The building is multi-winged with the base wing measuring 470' x 65'. There are seven projecting wings, two of which are under construction and measure 85' x 30' and are probably single test bays, one measures 150' x 25' and is probably a single test bay and four measure 150' x 55', three are probably double test bays and the fourth a single test bay with an additional servicing area. The seven wings are served by individual exhaust towers approximately 65 to 75 feet above ground level. Annotation B; this area consist of three buildings one large and two smaller buildings. The large building was a former thermal electric power plant, which has been converted since [REDACTED] to house three engine test cells. The two smaller buildings are new since 1956 but are prior to [REDACTED] one building houses a large test cell and the other is an unidentified building. The three buildings are connected by pipeline. Annotation #89; the function of this building is unknown. It is adjacent to the transformer yard (Annotation #90) but separated by an additional fence. The building appears to have been modified between [REDACTED]

25X1 [REDACTED] The measurements are 125' x 50' and the roof has two levels with the south section being approximately 50 to 55 feet tall. This tall section is rail served. Annotation #1 (Enclosure #2) This is a new building and its function is unknown. The foundation was started on [REDACTED] and completed on [REDACTED] (Annotation #56). The building was completed on [REDACTED] The building measures approximately 150' x 75' and is approximately 60 to 70 feet tall. Annotation #88 (Enclosure #1) shows four unidentified objects mounted on rail flatcars. These objects are approximately [REDACTED] all have the same configuration. Photography [REDACTED] shows five unidentified objects (Annotation #2, Enclosure #2), in the same general area, these are not mounted on flatcars, and only one has the same configuration as the four located at annotation #88. The object located approximately 200 feet south of the other four along the road between rail spurs appears to be mounted on a trailer, possibly a lowboy type and is connected to an unidentified prime mover. The trailer is canvas covered and has an irregular shape, measurements are approximately [REDACTED]

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KEY TO ANNOTATIONS: SEEN-YANG ARSENAL 90TH ENCLOSURE #1

1. Assembly building	665' x 490'
2. Assembly building	665' x 275'
3. Assembly building	360' x 330'
4. Assembly building	400' x 225'
5. Assembly building	425' x 250'
6. Assembly building	330' x 260'
7. Assembly building	570' x 250'
8. Assembly building	440' x 130'
9. Workshop	345' x 115'
10. Workshop and storage yard	305' x 115' - 270' x 130'
11. Possible forge or smelter	240' x 50'
12. Workshop	320' x 95' - 85' x 80'
13. Administration building	310' x 60' - 70' x 25' - 70' x 25'
14. Workshop and machine shop	210' x 175'
15. Workshop	210' x 75'
16. Machine shop and Workshop	215' x 135'
17. Machine shop and Workshop	320' x 135'
18. Machine shop	320' x 150'
19. Machine shop	215' x 150'
20. Machine shop	240' x 135'
21. Machine shop	175' x 85'
22. Storage building	240' x 150'
23. Machine shop	240' x 135'
24. Machine shop	345' x 135'
25. Storage building	160' x 90'
26. Storage building	110' x 80'
27. Machine shop	150' x 120'
28. Storage building	140' x 120'
29. Storage building	145' x 105'
30. U/I building	95' x 90'
31. U/I building	160' x 65'
32. Workshop	240' x 65'
33. Storage building	220' x 75'
34. Machine shop	205' x 125'
35. Workshop	205' x 65'
36. Machine shop	220' x 150'
37. Possible forge	240' x 85'
38. Administration building	150' x 35'
39. Workshop	200' x 85'
40. Boiler house and coal stockpile	120' x 95'
41. Machine shop	170' x 50'
42. Machine shop	160' x 50'
43. Three administration buildings	
44. Administration and possible laboratory buildings	
45. Possible laboratory buildings	

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46. Five unidentified service buildings
47. Administration building 95' x 55'
48. Administration and security building 370' x 40'
49. Motor vehicle storage and repair shed 200' x 70'
50. Fifteen fenced storage buildings 70' x 15' each
51. Storage building
52. Power Plant and coal stockpile 175' x 150'
53. Workshop 135' x 50'
54. Workshop 225' x 105'
55. Workshop 340' x 105'
56. Foundation for new building
57. Storage building 200' x 40'
58. Storage buildings
59. Storage buildings
60. Security buildings and guard quarters
61. Workshop and Machine shop 195' x 130' - 150' x 75'
62. Gantry crane
63. Storage building 135' x 40'
64. Storage buildings
65. Storage building 225' x 40'
66. Underground POL reservoir, pumping and control station
67. Seven storage buildings
68. Three warehouses
69. Unidentified building, within a secured area
70. Two large and two small warehouses
71. Two workshops
72. Maintenance shops and storage buildings
73. Warehouse 350' x 80'
74. Storage building 65' x 30'
75. Two large warehouses
76. Five warehouses
77. Six storage sheds and two large warehouses
78. Two warehouses and four storage sheds
79. Two warehouses and one unidentified building
80. Four warehouses
81. Open storage yard and two gantry cranes
82. Gantry crane and possible shipping and receiving building
83. Five warehouses
84. Four warehouses
85. Administration and six unidentified service buildings
86. Three water reservoirs
87. Administration building and storage buildings
88. Four unidentified objects on flatcars
89. Possible test building 125' x 50'
90. Transformer yard

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- A. Test building
B. Test Area, three buildings

KEY TO ANNOTATIONS: SHEN-YANG ARSENAL 90th ENCLOSURE #2

1. New building, function unknown, 150' x 75' by approximately 60-70 feet tall. Erected between [REDACTED] Foundation started [REDACTED]
2. Unidentified objects, one the same as shown on [REDACTED]
3. Engine test building, two wings partially completed between [REDACTED] Construction started possibly in early 1961.
4. Former thermal electric power plant converted to test cell building prior to 1961 and after 1956.

4. Shen-Yang Aircraft Engine Plant:

Shen-Yang Aircraft Engine Plant is located in the Ta Tung ward of Shen-Yang adjacent to Shen-Yang Arsenal 90th and Shen-Yang Airfield Southeast. The coordinates are 41°47'22"N/123°30'25"E. The plant area is enclosed by a masonry wall approximately [REDACTED]. The Engine Plant is served by the same rail line which serves the arsenal. This study was conducted from the same photography utilized in the study of Shen-Yang Arsenal. The Engine Plant has a total estimated floor space of 955, 475 square feet. All buildings were included in the total estimated floor space, only the major buildings have been annotated. This plant was rehabilitated between 1945 and 1956. A comparison between 1956 photography and [REDACTED] shows the construction of three new buildings which are indicated by the red stars (Enclosure #1). The buildings located at Annotations #1 and #3 were constructed prior to [REDACTED]. The power plant located at annotation #25 was under construction on [REDACTED] and was about 50 percent complete on [REDACTED]. The power plant is shown on [REDACTED] and is in the final stages of completion. The Engine test building at Annotation D contains six test cells. The test cell on the northern end of the building is undergoing modification on [REDACTED]. This photography shows what appears to be a possible cleared blast area, in the rear of the test cell mentioned above (Annotation #5 Enclosure #2). This construction and modification activity was in an early stage on [REDACTED].

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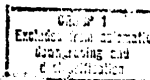
KEY TO ANNOTATIONS: SHEN-YANG AIRCRAFT ENGINE PLANT ENCLOSURE #1

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| 1. Storage building | 250' x 110' |
| 2. Workshop and storage | 360' x 185' |
| 3. Storage building | 180' x 70' |
| 4. Assembly and machine shop | 325' x 200' |
| 5. Machine shop and workshop | 170' x 145' |
| 6. Foundry | 185' x 185' |
| 7. Boiler house | 135' x 55' |
| 8. Administration building | 265' x 65' |
| 9. Storage building | 180' x 45' |
| 10. Assembly building | 530' x 220' |
| 11. Assembly and Machine shop | 580' x 170' |
| 12. Assembly building | 300' x 160' |
| 13. Workshops | 170' x 115' |
| 14. Storage buildings | 80' x 60' - 70' x 55' |
| 15. Assembly building | 250' x 170' |
| 16. Storage building | 200' x 45' |
| 17. Administration | 230' x 55' - 200' x 40' - 100' x 40' -
130' x 40' |
| 18. Maintenance shops | 100' x 30' |
| 19. Storage building | 150' x 55' |
| 20. Administration building | 75' x 75' |
| 21. Storage building | |
| 22. Administration buildings | |
| 23. Administration buildings | |
| 24. Two warehouses | |
| 25. Power plant under construction | |
| 26. Four warehouses | |
| 27. Machine shop | 165' x 110' |
| 28. Workshop | 230' x 100' |
| 29. Workshop | 135' x 135' |
| 30. Storage building | 100' x 35' |
| 31. Storage building | 85' x 40' |
| 32. Warehouse | 150' x 45' |
| 33. Underground POL reservoir, pumping and control station | |
| 34. Three large warehouses and two storage sheds | |
| 35. Boiler house | 130' x 50' |
| D. Test Cell building | |
| E. Additional Administration area | |
| F. Shen-Yang Airfield southeast and support area | |

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Page 7**KEY TO ANNOTATIONS: SHEN-YANG AIRCRAFT ENGINE PLANT ENCLOSURE #2**

- 25X1 5. Test cell building - one test cell modified and a possible blast area
25X1 constructed between [REDACTED]
25X1 6. Power plant - construction began on [REDACTED] approximately 50 percent
25 complete on [REDACTED] and is nearing completion on [REDACTED]
25 7. Dismantled Mig-19 and Shen-Yang Airfield Southeast repair facilities.

5. Summary

25X1 Shen-Yang Aircraft Engine Plant #410 and Shen-Yang Arsenal 90th are
definitely interrelated in their production activities. A more complete
evaluation of production activities at these two plants cannot be determined
from present photography. Additional photographic coverage would be needed
for a complete analysis of the engine test facilities. The arsenal may still
be engaged in the production of armament. The aircraft engine plant may or
may not be producing aircraft engines as a primary product. Airframe production
is possible but doubtful since the entrances of the final assembly sections on
the assembly buildings are not wide enough to accommodate an assembled aircraft.
Aircraft repair is probably undertaken at the facilities of the adjacent Shen-
Yang Airfield Southeast, (See Annotation F Enclosure #1 and Annotation #7
Enclosure #2). Each of the [REDACTED] Missions used in this study shows a notable
increase in overall activity at both plants.

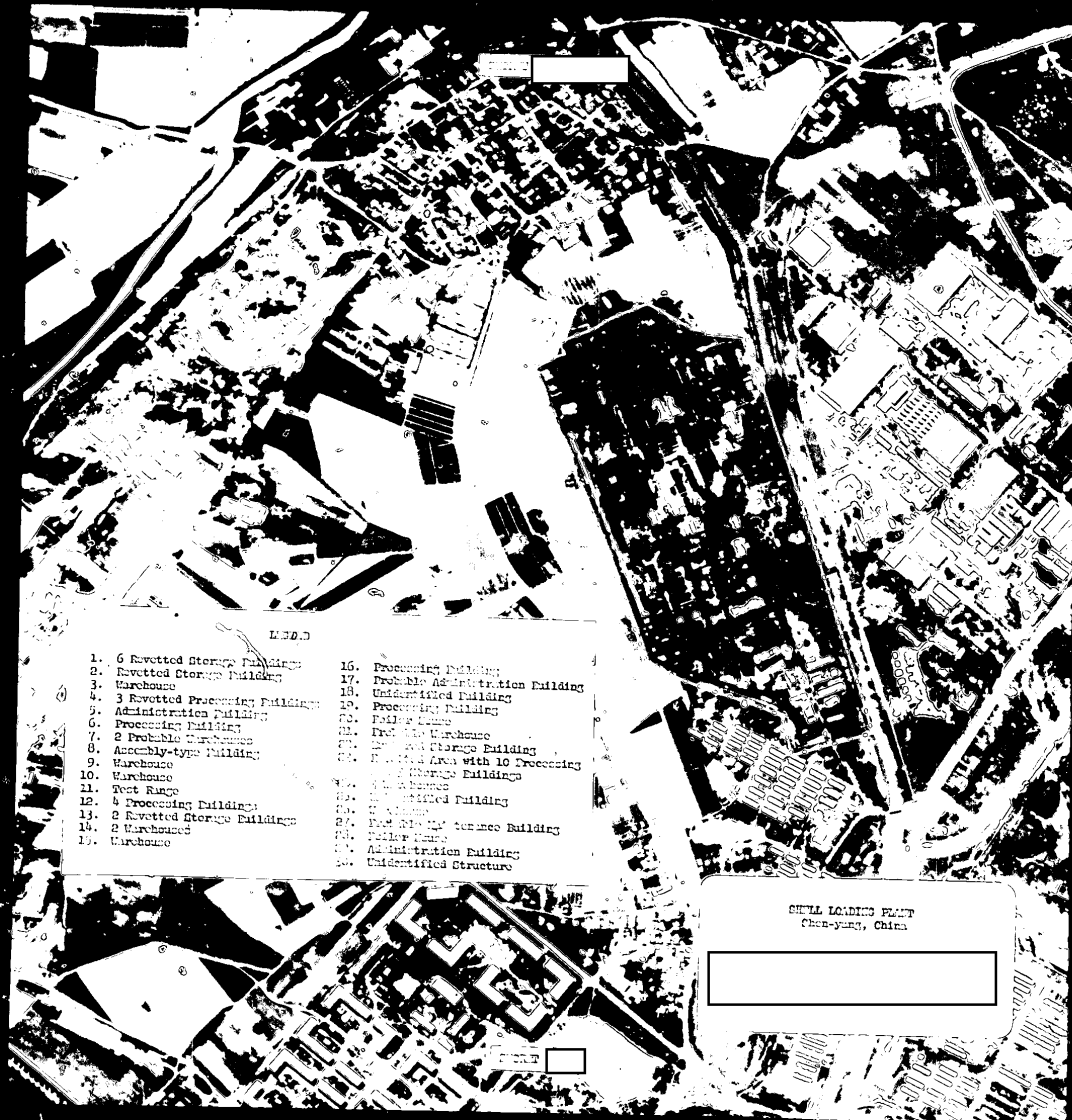
- 25X1 7. The photo analyst on this project is [REDACTED] who may be
contacted on extension [REDACTED] should you have further questions regarding this
project.

ENCLOSURES:

1. CIA/PID/IB-P-116/63
2. CIA/PID/IB-P-117/63

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| 1. 6 Revolted Storage Buildings | 16. Processing Building |
| 2. Revolted Storage Building | 17. Probable Aspiration Station Building |
| 3. Warehouse | 18. Unidentified Building |
| 4. 3 Revolted Processing Buildings | 19. Processing Building |
| 5. Administration Building | 20. Police Building |
| 6. Processing Building | 21. Police Building |
| 7. 2 Probable Warehouses | 22. Probable Warehouse |
| 8. Assembly-type Building | 23. Revolted Storage Building |
| 9. Warehouse | 24. Revolted Area with 10 Processing |
| 10. Warehouse | 25. Storage Buildings |
| 11. Port Range | 26. Warehouse |
| 12. 4 Processing Buildings | 27. Unidentified Building |
| 13. 2 Revolted Storage Buildings | 28. Unidentified Building |
| 14. 2 Warehouses | 29. Probable Customs Building |
| 15. Warehouse | 30. Police Building |
| | 31. Administration Building |
| | 32. Unidentified Structure |

SHELL LOADING PLANT
Chen-yang, China



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A. INITIATOR SECTION

1. Prob. precipitation bldg.
2. Prob. finishing bldg.
3. Processing bldg.
4. Storage bldg.
5. Packing bldg.

B. POWER SECTION

1. Processing bldg.
2. Storage bldg.
3. Unidentified bldg.
4. Boiler house
5. Craters at former bldg. sites

C. BOOSTER ASSEMBLY SECTION

1. Large processing bldg.
2. Revetted storage bldg.
3. Small metal bldg.

D. STORAGE AND SHIPPING SECTION

1. 22 large warehouses
2. Open storage areas
3. Numerous small bldgs.

E. BOOSTER LOADING SECTION

1. Large processing bldg.
2. Revetted storage bldg.
3. Small metal bldg.

F. FABRICATING SECTION

1. Machine shops
2. Foundries
3. Prob. foundries
4. Unidentified building
5. Admin. bldg.
6. Boiler houses
7. Numerous warehouses, and support buildings

G. UNIDENTIFIED PROCESSING SECTION

1. Assembly-type bldg.
2. Processing bldg.
3. Boiler house
4. Unidentified tall bldg.
5. Buried reservoir

H. ADMINISTRATIVE SECTION

I. LIQUID HANDLING SECTION

1. Tank (2nd added by 1953)
2. Loading/unloading bldg.
3. Boiler house
4. Tank cars

J. WOOD AND LUMBER SECTION

1. Open storage of logs
2. Sawmill
3. Lumber storage
4. Boiler house